Virtual wards are safe and effective for treatment of individuals with mpox

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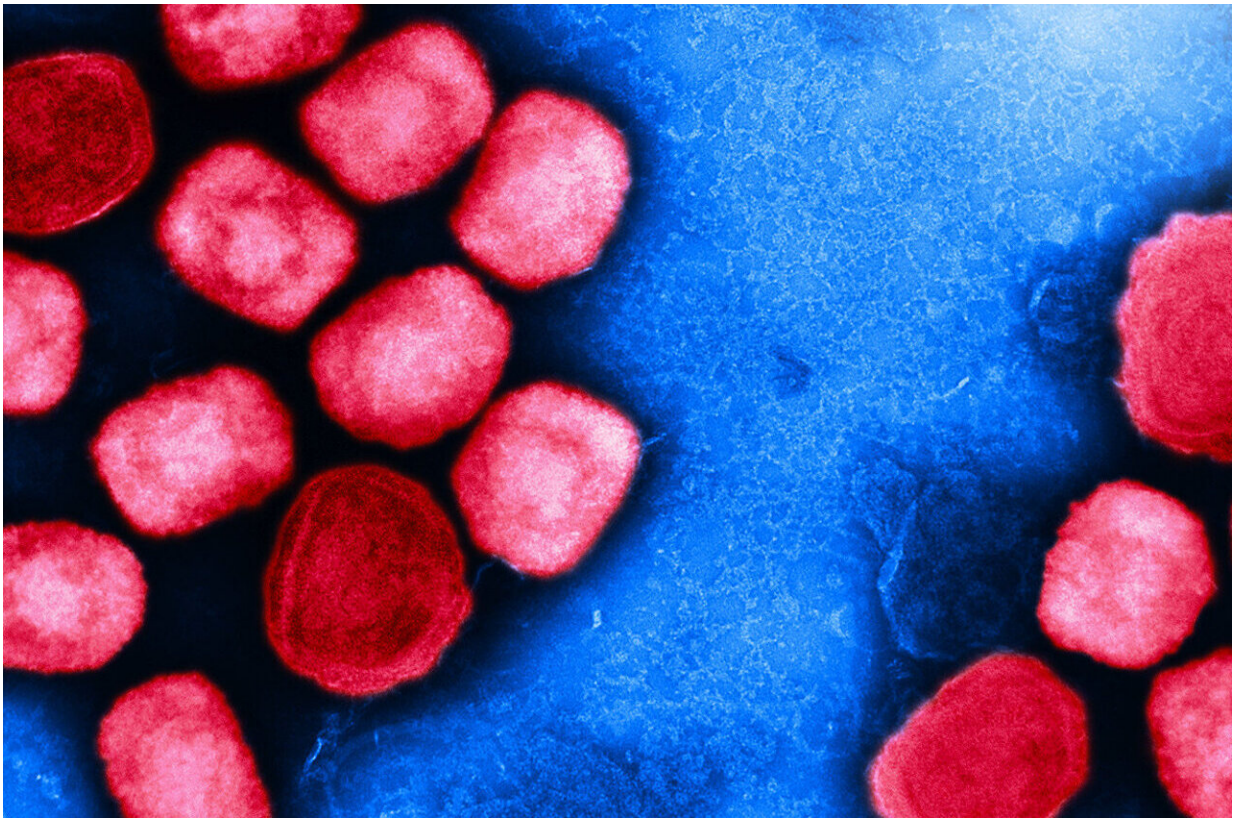

Colorized transmission electron micrograph of mpox virus particles (red) cultivated and purified from cell culture. Image captured at the NIAID Integrated Research Facility (IRF) in Fort Detrick, Maryland. Credit: NIAID

Most people with mpox (formerly known as monkeypox) can safely be treated on virtual wards, without admission to hospital, a UK study being

presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID 2023, Copenhagen, 15-18 April) suggests.

Eight-six per cent of individuals were managed exclusively as outpatients, saving an estimated 2,100 hospital bed days—a cost saving of approximately £1.05 million, the evaluation of one of the first services of its kind found.

2022 saw a global outbreak of mpox, a viral infection that circulates in some animals in West and Central Africa but had not previously been documented as having sustained person-to-person transmission.

At the start of the outbreak, mpox was classed as a high consequence infectious disease (HCID) in the UK, a classification that requires admission to specialized units for treatment. The classification was based on transmissibility, case fatality data from Africa and the absence of effective treatment or vaccines.

Case numbers in London grew swiftly, overwhelming the specialist units. At the same time, it became apparent that the case fatality rate was lower than previously reported.

"It rapidly became evident that admission of all cases was neither feasible, nor necessary," says Emily Shaw, of the Hospital for Tropical Diseases, University College London Hospitals NHS Foundation Trust, London, a consultant physician and lead researcher on the study.

"As a result, the Hospital for Tropical Diseases and Central and North West London NHS Foundation Trust created a virtual ward to care for the majority of people with mpox while they isolated at home.

We were among the first to do this—the outpatient management of

HCIDs was unprecedented in the UK.

"Our virtual ward model was endorsed by NHS England and was subsequently widely adopted in the UK to manage mpox cases."

Those treated on the virtual ward were assessed regularly by phone and could contact the team providing their care directly via a dedicated advice line. Prescription medication was delivered to them at home, when required.

The assessments included a review of their symptoms, mental well-being and isolation circumstances. Photographs were used to monitor changes in the blistering rash that is characteristic of mpox.

In this study, Dr. Shaw evaluates use of the virtual ward, which was set up in mid-May shortly after the first UK case was confirmed on May 7.

The case notes of all people with a confirmed diagnosis of mpox between May and August 2022 were reviewed.

221 individuals were diagnosed with mpox (age range 17-65 years, 219 (99%) male; 211 (95%) gay, bisexual or other man who has sex with men; 88 (40%) HIV positive) during the three-month period studied.

The majority (191, 86%) were managed exclusively as outpatients on the virtual wards. Sixty out of these 191 individuals received painkillers and other treatments to manage their symptoms and 35 were prescribed antibiotics for infections that occurred as a complication of their mpox (predominately cellulitis).

Thirty individuals (14%) required a period of admission, with soft tissue infections complicating their mpox lesions requiring intravenous antibiotics the most common reason. Most admissions were short

(median duration 4 days), with the majority able to complete their treatment at home via the virtual ward.

Twenty-four individuals (11%) disengaged from services and were lost to follow-up within four days of testing.

Fifty-six individuals/221 (25%) received treatment for another sexually transmitted infection.

A combination of photographs of the rashes and telephone assessments was used to decide when individuals could de-isolate—be "discharged" from the virtual ward—back into the community. The median time spent on the virtual ward was ten days.

The virtual ward saved an estimated 2,100 hospital bed days, which equates to a cost saving of approximately £1.05 million.

Dr. Shaw concludes: "We demonstrate that a virtual ward can be rapidly established to respond to emerging health threats and the majority of individuals with mpox can be safely managed virtually.

"Such strategies provide a model to respond to future outbreaks."

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